

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1           Claim 1. (Currently Amended) A shadow mask frame assembly of a flat cathode ray tube,  
2           comprising:

3           a shadow mask including a plurality of strips formed at a main body in a vertical direction  
4           by being separated by a predetermined distance by slits and a plurality of bridges forming slots by  
5           connecting neighboring strips and sectioning the slits, the slots including a plurality of first slot  
6           ~~group groups~~ and [[a]] second slot group groups with the slots, the first slot ~~group groups~~ having a  
7           wider interval between the bridges than the second slot ~~group groups~~, with each one of the first slot  
8           groups including at least two columns of slots and each one of the second slot groups including at  
9           least two columns of slots, the slots partially passing through thermions emitted from an electron gun  
10          of said flat cathode ray tube while the remaining thermions colliding against the strips and the  
11          bridges; and

12          a frame supporting said shadow mask, said frame comprising:

13                  a first support member and a second support member secured at a long side portion  
14          of said shadow mask; and

15                  a first elastic member and a second elastic member, said first elastic member and said

16 second elastic member each having two end portions, [[each]] one of said two end portions coupled  
17 to said first support member and the other one of the two end portions coupled to said ~~either one of~~  
18 ~~said first or second support members~~ member, said first and second elastic members applying a  
19 tension force to said shadow mask.

1 Claim 2. (Currently Amended) A shadow mask frame assembly of a flat cathode ray tube,  
2 comprising:

3 a shadow mask including a plurality of strips formed at a main body in a vertical direction  
4 by being separated by a predetermined distance by slits and a plurality of bridges forming slots by  
5 connecting neighboring strips and sectioning the slits, the slots including a first slot group and a  
6 second slot group with the slots, the first slot group having a wider interval between the bridges than  
7 the second slot group, the slots partially passing through thermions emitted from an electron gun of  
8 said flat cathode ray tube while the remaining thermions colliding against the strips and the bridges;  
9 and

10 a frame supporting said shadow mask, said frame comprising:

11 a first support member and a second support member secured at a long side portion  
12 of said shadow mask; and

13 a first elastic member and a second elastic member, said first elastic member and said  
14 second elastic member each having two end portions, one of said two end portions coupled to said  
15 first support member and the other one of the two end portions coupled to said second support  
16 member, said first and second elastic members applying a tension force to said shadow mask,

17       ~~The assembly as claimed in claim 1~~, with at least one second slot group forming at said upper  
18 and lower portions of said shadow mask in a vertical direction while the first slot group is being  
19 formed between the two second slot groups in the vertical direction.

1       Claim 3. (Currently Amended) A shadow mask frame assembly of a flat cathode ray tube,  
2 comprising:

3       a shadow mask including a plurality of strips formed at a main body in a vertical direction  
4 by being separated by a predetermined distance by slits and a plurality of bridges forming slots by  
5 connecting neighboring strips and sectioning the slits, the slots including a first slot group and a  
6 second slot group with the slots, the first slot group having a wider interval between the bridges than  
7 the second slot group, the slots partially passing through thermions emitted from an electron gun of  
8 said flat cathode ray tube while the remaining thermions colliding against the strips and the bridges;  
9 and

10       a frame supporting said shadow mask, said frame comprising:

11       a first support member and a second support member secured at a long side portion  
12 of said shadow mask; and

13       a first elastic member and a second elastic member, said first elastic member and said  
14 second elastic member each having two end portions, one of said two end portions coupled to said  
15 first support member and the other one of the two end portions coupled to said second support  
16 member, said first and second elastic members applying a tension force to said shadow mask,

17       ~~The assembly as claimed in claim 1~~, with the first slot group being formed at the central

18 portion of the main body in the vertical direction.

1 Claim 4. (Original) The assembly as claimed in claim 2, with the number of the slots forming  
2 the first slot group in the vertical direction being one.

1 Claim 5. (Original) The assembly as claimed in claim 3, with the number of the slots forming  
2 the first slot group in the vertical direction being one.

1 Claim 6. (Original) The assembly as claimed in claim 4, with the number of the slots forming  
2 the second slot group in the vertical direction being at least three.

1 Claim 7. (Original) The assembly as claimed in claim 6, with the length of each of the slots  
2 forming the second slot group being substantially the same.

1 Claim 8. (Original) The assembly as claimed in claim 7, with the length of each of the slots  
2 of the second slot groups in the vertical direction and the length of the slots of the first slot group in  
3 the vertical direction being substantially the same.

1 Claim 9. (Original) The assembly as claimed in claim 7, with the sum of the lengths of the  
2 slots of the second slot group in the vertical direction being substantially the same as the length of  
3 the slots of the first slot group in the vertical direction.

1           Claim 10. (Currently Amended) A shadow mask frame assembly of a flat cathode ray tube,  
2           comprising:

3           a shadow mask including a plurality of strips formed at a main body in a vertical direction  
4           by being separated by a predetermined distance by slits and a plurality of bridges forming slots by  
5           connecting neighboring strips and sectioning the slits, the slots including a first slot group and a  
6           second slot group with the slots, the first slot group having a wider interval between the bridges than  
7           the second slot group, the slots partially passing through thermions emitted from an electron gun of  
8           said flat cathode ray tube while the remaining thermions colliding against the strips and the bridges;  
9           and

10           a frame supporting said shadow mask, said frame comprising:

11           a first support member and a second support member secured at a long side portion  
12           of said shadow mask; and

13           a first elastic member and a second elastic member, said first elastic member and said  
14           second elastic member each having two end portions, one of said two end portions coupled to said  
15           first support member and the other one of the two end portions coupled to said second support  
16           member, said first and second elastic members applying a tension force to said shadow mask,

17           ~~The assembly as claimed in claim 1,~~ with a plurality of the second slot groups and the first  
18           slot groups being formed in the vertical direction accommodating each of the first and second groups  
19           appearing alternately.

1 Claim 11. (Currently Amended) A shadow mask frame assembly of a flat cathode ray tube,  
2 comprising:

3 a shadow mask including a plurality of strips formed at a main body in a vertical direction  
4 by being separated by a predetermined distance by slits and a plurality of bridges forming slots by  
5 connecting neighboring strips and sectioning the slits, the slots including a first slot group and a  
6 second slot group with the slots, the first slot group having a wider interval between the bridges than  
7 the second slot group, the slots partially passing through thermions emitted from an electron gun of  
8 said flat cathode ray tube while the remaining thermions colliding against the strips and the bridges;  
9 and

10 a frame supporting said shadow mask, said frame comprising:

11 a first support member and a second support member secured at a long side portion  
12 of said shadow mask; and

13 a first elastic member and a second elastic member, said first elastic member and said  
14 second elastic member each having two end portions, one of said two end portions coupled to said  
15 first support member and the other one of the two end portions coupled to said second support  
16 member, said first and second elastic members applying a tension force to said shadow mask,

17 ~~The assembly as claimed in claim 1,~~ with the first slot group being formed at the middle  
18 portion in the vertical direction and the second slot group being formed at peripheries at both sides  
19 of the first slot group.

1 Claim 12. (Currently Amended) A shadow mask frame assembly of a flat cathode ray tube,

comprising:

a shadow mask including a plurality of strips formed at a main body in a vertical direction by being separated a predetermined distance by slits and a plurality of bridges forming slots by connecting neighboring strips and sectioning the slits, a portion of said shadow mask including at least one strip where the bridges are formed and a portion of said shadow mask including at least one strip where the bridges are not formed are alternately disposed in a horizontal direction;

first and second support members secured at a long side portion of said shadow mask; and elastic members having either end portion secured to each of said first and second support members for applying a tension force to said shadow mask.

Claim 13. (Currently Amended) The assembly as claimed in claim [[10]] 12, with the intervals between the bridges in the vertical direction being substantially the same.

Claims 14-29. (Canceled)

Claim 30. (Currently Amended) A shadow mask frame assembly, comprising:

a shadow mask, comprising:

a plurality of strips forming columns in a vertical direction on a main body of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat cathode ray tube;

a plurality of slits forming columns and separating the columns of said strips,

7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9 a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group, with at least one column having both the first slot group and the second slot  
15 group; and

16 a frame supporting said shadow mask.

1 Claim 31. (Currently Amended) The apparatus of claim 30, with said frame comprising:

2 a first support member and a second support member secured at a long side portion  
3 of said shadow mask; and

4 a first elastic member and a second elastic member, said first elastic member and said  
5 second elastic member each having two end portions, [[each]] one of said two end portions coupled  
6 to said first support member and the other one of the two end portions coupled to said ~~either one of~~  
7 ~~said first or second support members~~ member, said first and second elastic members applying a  
8 tension force to said shadow mask.

1 Claim 32. (Currently Amended) A shadow mask frame assembly, comprising:



2           a shadow mask, comprising:

3                       a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6                       a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9                       a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group; and

15           a frame supporting said shadow mask,

16           The apparatus of claim 30, with the first slot group forming at a central portion of said main  
17 body of said shadow mask in the vertical direction.

1           Claim 33. (Original) The apparatus of claim 32, with the second slot group formed at the  
2 upper or lower portion of the main body of said shadow mask.

1           Claim 34. (Currently Amended) A shadow mask frame assembly, comprising:

2        a shadow mask, comprising:

3                a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6                a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9                a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group; and

15        a frame supporting said shadow mask,

16        ~~The apparatus of claim 30,~~ with the number of slots forming the first slot group being one  
17 while the number of slots forming the second slot group being at least three.

1        Claim 35. (Original) The apparatus of claim 30, with the length of the slots of the second slot  
2 group being formed uniformly.

1        Claim 36. (Currently Amended) A shadow mask frame assembly, comprising:

2           a shadow mask, comprising:

3                   a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6                   a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9                   a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group; and

15           a frame supporting said shadow mask,

16           The apparatus of claim 30; with the length of the first slot group being approximately equal  
17 to a length of a slot in the first slot group.

1           Claim 37. (Currently Amended) A shadow mask frame assembly, comprising:

2           a shadow mask, comprising:

3                   a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat

5 cathode ray tube;

6 a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9 a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group; and

15 a frame supporting said shadow mask,

16 ~~The apparatus of claim 30,~~ with the slots being symmetrically formed with respect a median  
17 line cutting across the middle of the columns of slots, said bridges being formed at approximately  
18 identical intervals on either side of the median line.

1 Claim 38. (Currently Amended) A shadow mask frame assembly, comprising:

2 a shadow mask, comprising:

3 a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6 a plurality of slits forming columns and separating the columns of said strips,

7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9 a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group; and

15 a frame supporting said shadow mask,

16 ~~The apparatus of claim 30~~, with the interval length between bridges at the periphery of upper  
17 and lower portions of said shadow mask being less than the interval length between the bridges at  
18 the center of said shadow mask accommodating a greater rigidity of the strips.

1 Claim 39. (Currently Amended) A shadow mask frame assembly, comprising:

2 a shadow mask, comprising:

3 a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6 a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9                   a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group; and

15                   a frame supporting said shadow mask,

16                   ~~The apparatus of claim 30,~~ with a length of the first slot group in the middle of the shadow  
17 mask being determined according to the amount of the tension force applied to said shadow mask  
18 and to the size of a panel of said cathode ray tube.

1                   Claim 40. (Currently Amended) A shadow mask frame assembly, comprising:

2                   a shadow mask, comprising:

3                   a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6                   a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9                   a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow

11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than  
14 the second slot group; and

15 a frame supporting said shadow mask,

16 ~~The apparatus of claim 30,~~ further comprising a plurality of second slot groups and a plurality  
17 of first slot groups alternately formed in a vertical direction.

1 Claim 41. (Currently Amended) A shadow mask frame assembly, comprising:

2 a shadow mask, comprising:

3 a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6 a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9 a plurality of bridges sectioning the columns of the plurality of slits, said  
10 bridges preventing the passing of electron beams from said flat cathode ray tube through said shadow  
11 mask, said plurality of bridges forming slots by connecting adjacent strips and sectioning the slits,  
12 said slots arranged in columns in the vertical direction, the slots being arranged in a first slot group  
13 and a second slot group, the first slot group having slots with a wider interval between bridges than

14 the second slot group; and

15 a frame supporting said shadow mask,

16 ~~The apparatus of claim 30,~~ with the first slot group being formed in the middle portion of  
17 the shadow mask in a horizontal direction while the second slot group is formed at the peripheries  
18 at both sides of said shadow mask in the horizontal direction.

1 Claim 42. (Currently Amended) A shadow mask frame assembly, comprising:

2 a shadow mask, comprising:

3 a plurality of strips forming columns in a vertical direction on a main body  
4 of said shadow mask, the strips not passing electron beams emitted from an electron gun of a flat  
5 cathode ray tube;

6 a plurality of slits forming columns and separating the columns of said strips,  
7 the plurality of slits passing electron beams emitted from said electron gun of said flat cathode ray  
8 tube; and

9 a plurality of bridges sectioning at least one of the columns of the plurality of  
10 slits, said bridges preventing the passing of electron beams from said flat cathode ray tube through  
11 said shadow mask, said plurality of bridges forming slots by connecting adjacent strips and  
12 sectioning the slits, said slots arranged in columns in the vertical direction, the slots being arranged  
13 in a first slot group and a second slot group, the first slot group having slots with a wider interval  
14 between bridges than the second slot group; and

15 a frame supporting said shadow mask,



16           ~~The apparatus of claim 30~~, with columns of said slits having bridges alternating with  
17 columns of a single slit with no bridges on said shadow mask.

1           Claim 43. (Original) The apparatus of claim 30, with the width of said bridges being formed  
2 to accommodate a latent image not being displayed when the electron beam from the electron gun  
3 passes through adjacent slots sectioned by the bridges and lands on a fluorescent film.

1           Claim 44. (Original) The apparatus of claim 30, with the bridges positioning on said shadow  
2 mask according to the material of said shadow mask and a tension force against said shadow mask.

1           Claim 45. (Original) The apparatus of claim 31, with said first and second support members  
2 being separated a predetermined distance and said secured portion and said reinforcement portion  
3 forming an L shape.

1           Claim 46. (New) The apparatus of claim 30, with said first and second slot groups being  
2 formed with other first and second slot groups and the first and second slot groups being provided  
3 alternately along one of the columns.

1           Claim 47. (New) The assembly as claimed in claim 1, with the first slot groups alternating  
2 with the second slot groups.